

Order Instituting Rulemaking on the Commission's Own Motion into Monitoring)	•
Performance of Operations Support Systems). -))	R. 97-10-016
Order Instituting Investigation on the Commission's Own Motion into Monitoring Performance of Operations Support Systems)))	I. 97-10-017

MOTION TO ACCEPT JOINT COMMENTS REGARDING REPORT ON PERFORMANCE INCENTIVES

This motion is filed pursuant to discussion with the Commission's

Telecommunications Division and is being filed concurrently with an identical motion in
the 271 collaborative process. During a series of meetings held over the past several
months, a group of interested parties (the "Moving Parties") have discussed the
appropriate application of incentives to performance measures, including the statistical
methodologies that should be used with respect to those incentives. These discussions

¹ The Moving Parties are Pacific Bell, AT&T, MCI WorldCom, Sprint Communications, Electric Lightwave, Inc., ICG Telecom Group, Inc., Covad Communications, MediaOne Telecommunications of California, Inc., Cox California Telecom, L. L. C., Northpoint Communications and the California Cable Television Association.

were held separately from the discussions that addressed the specific performance measures themselves.

While the Moving Parties did not reach final agreement on the statistical methodologies to be applied, the formulas for the imposition of incentives, or the compensation to be paid as incentives, the meetings were positive and cooperative. In addition, the Commission staff was kept promptly and consistently apprised of those discussions.

Because the Moving Parties were not able to reach final agreement, they have prepared a "Report To The California Public Utilities Commission On Performance Incentives." This Report sets forth the various positions of the Moving Parties on the issues that were discussed during the course of the meetings.

Pursuant to Rule 45 of the Commission's Rules of Practice and Procedure, the Moving Parties now file this motion requesting the Commission to accept the Report as joint comments in this docket. The Report is filed on October 5 at the direction of the Commission staff.

Respectfully submitted this 5th day of October, 1998.

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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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LATE FILED JOINT COMMENTS

REGARDING REPORT ON PERFORMANCE INCENTIVES

REPORT TO

THE CALIFORNIA PUBLIC UTILITIES COMMISSION

ON PERFORMANCE INCENTIVES

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I. INTRODUCTION

This report is submitted to the California Public Utilities Commission on the subject of performance incentives, including statistical methodologies, pursuant to the request of the CPUC's Telecommunications Division. It is based upon the results of a series of meetings among interested industry participants, conducted in conjunction with the OSS OII proceeding and the 271 collaborative process. In those meetings, the parties have addressed issues related to the determination of appropriate performance incentives for Pacific Bell and GTE, although the focus has been primarily on Pacific, in light of its interests under Section 271.

The parties that have participated in these discussions are as follows:

- Pacific Bell
- GTE
- AT&T
- MCI WorldCom
- Sprint Communications
- Electric Lightwave, Inc.
- ICG Telecom Group, Inc.

- Covad Communications
- MediaOne Telecommunications of Calif., Inc.
- Cox California Telecom L.L.C.
- Calif. Cable Television Assoc.
- Northpoint Communications

The purposes of the performance incentives addressed in the meetings between these parties are to incent Pacific to provide a parity of performance as measured by the performance measures adopted in the OSS OII. During the course of their discussions, the parties submitting this report did not reach a final agreement on either the methodology for such incentives or the proper amounts to be used for such incentives. However, they have established certain guidelines to be considered in the determination of the proper incentives, including a listing of

¹ Although GTE was an active participant for the statistical methodology discussions, GTE has not been a participant in the discussions of incentives. However, it is the understanding of the parties that separate discussions between GTE and the CLECs are to occur according to the instructions of the CPUC.

specific subjects that should be evaluated in the determination as to which incentives plan should be adopted. In addition, the meeting participants discussed three specific proposals that were set forth by certain parties during the meetings.

Throughout this document, the reference to "CLEC position" is a reference to all of the CLECs except Sprint. Sprint is interested in this proceeding both as a CLEC in California and as an ILEC in Nevada and its views are identified throughout as "Sprint position." In addition, in certain circumstances Cox has a position that varies from the rest of the CLECs; in those cases, its views are identified as "Cox position."

This report addresses the agreements and disagreements on methodologies and amounts, as well as the guidelines and subject areas to be considered in establishing incentives. It also sets forth the specific proposals for performance incentives that were presented during the meetings.

II. SPECIFIC SUBJECTS

The discussion of performance incentives focused on a number of specific subjects. The parties did not agree that all of these subjects need to be included in the incentives plan that is adopted by the Commission. They did agree, however, that each of these subjects should be considered in connection with determining the details of the incentives plan.

The following subjects were addressed:

a. Statistical methodology

1. Modified z/t tests

Pacific, GTE and the CLECs agreed to use a modified z/t-tests to assess parity of performance. Standard statistical analysis will be applied to each measurement result. As the parties who will have the data and perform the statistical analyses, Pacific and GTE will use

these modified tests for an interim period of time, six to twelve months, while assessing their utility. If, at the end of that period of time, the ILECs believe these tests to be less effective than the standard z/t tests, Pacific and GTE will request a review and reassessment of statistical testing methodology.

Cox Position:

Cox believes that the approach taken by other parities is far too complex to implement with certainty and will ultimately prove too difficult a tool to monitor whether Pacific is providing parity service to CLECs. Cox also believes that a one-to-one comparison approach should be used to determine whether or not Pacific is providing parity service to CLECs on a submeasure basis. Cox submits that a less complicated approach is warranted given the fact that all "transactions" that are captured by the performance measures will be counted for purposes of determining parity. Therefore, Cox proposes that CLEC data for a particular submeasure be directly compared to Pacific's data for the same submeasure. If a CLEC receives worse service than Pacific provided to itself and its customers, then Pacific performance should be considered below parity.

Critical value and alpha value

Pacific position:

Pacific's plan employs two critical values; one is set at one standard deviation and the other is set at three standard deviations. As described more fully below, in the section entitled "Specific criteria for determining imposition of incentives," the incentives Pacific proposes are larger where Pacific's performance is worse than three standard deviations of the service it provides itself than where Pacific's performance is between one and three standard deviations.

Pacific's proposal to establish the first critical value at one standard deviation is strongly conditioned on having a mitigation plan in place to account for random variation. As discussed more fully below in the section entitled "Mitigation," a critical value of one standard deviation is associated with an alpha value of approximately 15%.² In practical terms, this means that due to random variation alone, Pacific in theory is expected to miss, on average, 15% of all measures (or one out of six) each month, even if Pacific has all the correct systems and processes in place, and is properly executing its obligations to provide parity of service to the CLECs. Certainly, a test that has only an 85% degree of reliability should not be used to impose incentive payments without some form of

² Once a critical value is established, it determines the alpha value.

mitigation. For this reason, Pacific's plan strongly emphasizes the importance of credits to mitigate the consequences of Pacific being found to be out of compliance 15% of the time, due solely to random variation (see discussion on "Credits" under discussion of "Mitigation"). If Pacific's credit plan is not approved, then Pacific proposes an alpha value of 5% to reduce the amount that Pacific will have to pay, to a near statistical certainty, due to random variation.

CLEC position:

The alpha for the test statistic should be set at 15%, which automatically sets the critical value at approximately 1 standard deviation. The 15% Type I error rate should apply to each month's worth of data.

The CLECs would not condition the use of 15% Type I error as the basis for setting critical values either upon the implementation of credits or a follow-on constraint that two consecutive months of measures of failures must occur before a penalty is applicable (based on a 15% Type I error rate). A critical value based on a 15% Type I error rate is a reasonable substitute for the Equal Risk methodology favored by the CLECs and represents a measure missing by approximately one standard deviation.

The limiting of penalties to only those instances where two consecutive failures occur totally destroys the concept of balanced risk. That is, if two consecutive months must fail, then the probability of the failure being due to Type I error alone is reduced to about 2.25% (the probability consecutive independent events having a 15% probability of occurring twice in a row is 15% * 15% or 2.25%). Thus while Pacific's risk of a false declaration of non-parity is reduced to de minimus levels, the CLEC risk of discriminatory performance going undetected remains at 15% or, in other terms, the CLEC bears seven times the error risk as does Pacific.

Other means exist for mitigating the financial impacts of fines applied solely due to Type I error. Such mechanisms should be applied rather than one that will imbalance risk and reduce the ability to detect non-conforming performance (i.e., two consecutive months of failures).

Sprint position:

With regard to individual measurements, Sprint believes an alpha value of 5% is more appropriate when combined with the condition that 3 consecutive months of non-compliance constitutes a Type A Occurrence.

3. Sample size

Pacific Bell position:

The generally recognized statistically valid sample size in most statistics textbooks is 30 occurrences. However, in an effort to compromise, Pacific is. willing to reduce the valid sample size to 20 occurrences. Under Pacific's plan, a particular measure will not be considered to have statistically valid results unless there is a sample size of at least 20 occurrences during the reporting period.

Since its filing, Pacific has also modified its proposal to account for CLECs that fail to submit sufficient orders in a reporting period to qualify under the sample size criterion. Pacific will allow CLECs to aggregate results in two different manners. First, Pacific will allow an individual CLEC to aggregate Service Group Types, as long as the Service Group Types are technically similar or follow a similar ordering/provisioning, maintenance or billing process (i.e. UNE Loop types could be aggregated or Residence and Business POTS service could be aggregated), by Service Order types or by other measurement categories as appropriate. This is referred to as Type 1 Aggregation. If a CLEC still fails to qualify under Type 1 Aggregation, Pacific will also allow an individual CLEC to aggregate data among all other CLECs, by disaggregated submeasure, to achieve a statistically valid sample size in a reporting period. This second type of aggregation, Type 2 Aggregation, is done instead of the Type 1 Aggregation. In regard to the pool of CLECs employed for Type 2 aggregation, Pacific also does not object to having those CLECs aggregate their results with the entire CLEC community, rather than only with those CLECs failing to meet the sample size test, to determine whether incentives should be applied. Either form Type 2 Aggregation is acceptable to Pacific.

Pacific, however, opposes any aggregation across different months. Conditions affecting service quality change dramatically from month to month, particularly with the change of seasons. Adding statistically invalid sample sizes under varying conditions does not meaningfully reduce the problems posed by lack of data points. It simply adds different potential errors with one another without mitigating the errors in a statistically valid manner.

As for the allocation of incentive payments under an aggregation plan, Pacific discusses its proposal below.

Certain CLECs propose a sample size of 10. The margin of error with a sample size that small is considerable. The permutation proposal is cumbersome and does not reliably reduce the margin for error. The most reasonable approach is to simply aggregate results for CLECs that have sample sizes less than 20, through the Type 1 and Type 2 aggregation methods.

CLEC Position:

Valid statistical tests can be performed with a sample size as small as 6, but during the course of the meetings the CLECs agreed, in an effort to compromise, that the minimum sample size be set at 10. Although the assumption of a normal distribution requires a larger sample size, an alternative method — the permutation distribution — can be used for smaller sample sizes to generate the probability distribution and calculate the corresponding z statistic. Under the set of performance submeasures that the parties have agreed to, it is reasonable to assume that many, if not all, CLECs will have small sample sizes for at least some submeasures. The higher the minimum sample size is set before the results of the test are considered valid, the more tests are excluded from being subject to incentives and even being performed at all.

Even with a minimum sample size of 10, there will be instances where individual CLECs will have less than 10 events in a given month for a given submeasure. The CLECs propose that CLEC data that falls below the minimum be aggregated across time for that CLEC, i.e., combine one month's data with the next month's data, and so on, until the minimum sample sizes is achieved. The CLEC result would then be compared to Pacific's result for the same time period.³

The number of "expected random failures" is a function of the total number of results utilized within a particular month's evaluation. Thus, any situation that results in the exclusion of measurement result(s) from consideration — whether due to small sample size or other exclusions — must then also result in an appropriate downward adjustment to the threshold number of failures that determine when penalties are applicable.

Sprint position:

Sufficient data must be sampled for a Performance Measurement or Performance Sub-Measurement to be statistically valid. When the permutation test is used, the minimum sample size is 5 observations. If the permutation test is not used, then a sample size of 30 is required.

b. Measures to which incentives will be applied

The parties recognized that the performance incentives should not necessarily be applied to all of the performance measures that are to be adopted. In a few circumstances, one

Because of the special nature of collocation, the CLECs recommend that the performance measures for collocation be excluded from the minimum sample size requirements, including aggregation over time.

performance measure is closely correlated with another performance measure. In such circumstances, the failure of Pacific to comply with the first performance measure will necessarily be reflected in Pacific's failure to comply with the second performance measure. In such a case, Pacific would be penalized twice for the same conduct if performance incentives applied to both measures.

Sprint takes a simplistic approach to this issue by allowing a specified number of performance measurements to be in non-compliance.

Pacific and the CLECs agreed that the adopted performance incentives should apply to the following measures:⁴

PRE-ORDERING

1b. Average Response Time

ORDERING

3a. Av. FOC Notice Interval

4. Av. Reject Notice Interval (electronic only)

PROVISIONING

10c. Av. Completed Interval

12a. % of Due Dates Missed

14a. % of Troubles in 30 days for New Orders

20a. Held Order Interval

7a. Av. Completion Notice Interval

MAINTENANCE

22c Customer Trouble Report Rate

23b. % of Cust. Troubles Resolved w/in Est. Time

24b. Av. Time to Restore

26b. Frequency of Repeat Troubles in 30 day period

Pacific and the CLECs agreed to exclude the following measures from the incentives: 11a. % Completed within Standard Interval, 13a. % of Due Dates Missed due to Lack of Facilities, and 25b. POTS out of Service less than 24 hours. These measurements are sub-sets of the following measurements (respectively): Average Completion Interval, % of Due Dates Missed, and Average Time to Restore. As sub-set measures, if the primary measure is out-of-compliance, then it is virtually impossible for the sub-set measure to be in compliance, creating a double penalty situation. The same non-compliant results would actually be subject to incentive assessments twice.

NETWORK PERFORMANCE

29c. %Blocking on Interconnection Trunks

32-81 Network Outage Notification

64a, NXX Loaded by LERG Eff. Date

BILLING

- 38b. Usage Timeliness
- 39b. Accuracy of Usage Feed (with CLECs agreeing to an audit of the process used to determine the accuracy of the usage feed)
- 40b. Wholesale Bill Timeliness
- 41 Usage Completeness
- 42a. Recurring Charge Completeness
- 44a. Bill Accuracy
- 44b. Accuracy of Mechanized Bill Feed (with CLECs agreeing to an audit of the process used to determine the accuracy of the mechanized bill feed)
- 43a. Non-Recurring Charge Completeness

DATABASE UPDATES

62a-52b. Av. Database Interval

62a.-52b. Percent Database Accuracy (excluding CLEC-caused errors)

61a ALI Database Update Average

COLLOCATION

82. Av. Time to Respond to Collo. Request

83. Av. Time to Provide Collo. Arrange.

OTHER

2a. % of Time Interface is Avail.

16b. Av. Notification of Outages

30a. Center Responsiveness

In addition, the CLECs believe, but Pacific does not agree, that the incentives should apply to the

following additional measures:

PRE-ORDERING

8a. % of Flow-through Orders

PROVISIONING

18a. Delay Order Interval To Completion Date

NETWORK PERFORMANCE

28a. % Blocking on Common Trunks

Pacific Bell's position on why these measures should not be subject to incentives:

Pacific does not believe that all measures within the OSS OII Performance Measurement Plan should be subject to Incentives Assessments. The reasons for exclusion generally vary for each measure excluded.

Measure 8a. % of Flow Through Orders - this measurement assesses the number of service requests electronically submitted to the ILEC which mechanically result in a service orders within the ILEC's service order creation system (in the case of Pacific, the SORD system). Results of this measures will vary over time, basically for two reasons: 1) results will be dependent upon the service group type/service order type combinations for which Pacific programs this automated service order capability. These service types which have this capability will become more numerous over time but will probably never reach 100%; and 2) how closely the service group type/service order type combinations ordered by CLECs match those programmed to flow through. If CLECs are ordering services which are programmed to flow through, the results of this measure could be quite high. If not, the percent flow through could be very low. Because of these two factors, especially the second one, it is very difficult to determine what constitutes acceptable performance for this measurement, and thus determine when incentives would apply.

Moreover, in some instances, it makes no economic or rational sense to build flow through for orders that will have very low volumes, or which will disappear altogether (e.g., INP orders). Pacific's ability to enter complex orders into its systems is generally limited to SORD. The only rational performance measure for flow through would be based on the CLECs' willingness to use SORD for these types of orders. Otherwise, any other performance measure would be premised on Pacific having to provide the CLECs more ordering functionality than Pacific provides itself. Where there are sufficient levels of volume, Pacific has the incentive to mechanize CLEC orders to reduce Pacific's own costs associated with labor resources necessary to input service orders.

Measure 18a. Delay Order Interval to Completion Date - This measure is strongly correlated to 20a. Held Order Interval. It measures the average interval between due date and completion date when an order is delayed beyond its original due date. Held Order Interval measures the interval on those orders delayed passed their due date, but not yet complete. Both measures evaluate the same process at differing points of the service order life cycle, the only difference being that for one the order has been processed and for the other it is still pending. Accordingly, there is a significant degree of overlap between the two measures. Every order that is delayed at completion, at one point was a held order.

Measure 28a. % Blocking on Common Trunks - the common transport network provides parity by design as traffic transiting it is non-distinguishable by customer type (CLEC or ILEC). This measure is diagnostic only as it simply provides information on % of Common Transport trunks blocking at a rate of greater than 2%. The effect of the results would be the same for the ILEC as it would be for the CLEC.

In considering these exclusions, it should be recognized that Pacific agreed to count certain measures which, although they are not 100% interdependent of another measure, are correlated to some degree or another. For example, average completed interval for provisioning is going to be correlated to some extent with percent missed due dates. Nevertheless, Pacific judiciously chose those measures to exclude that are most likely to frustrate the purpose of incentives.

CLEC position on why these measures should be subject to incentives:

MEASURE: 8a. Percentage of Flow-Through Orders

POSITION: Should be included in measures eligible for incentives. However, any incentives should be put into escrow fund. If Pacific meets its development dates for automating the handshake between the electronic interface and its ordering systems (e.g., SORD), the money in escrow is returned to Pacific. If Pacific does not, the money is disbursed to the harmed CLECs. In any event, once the automated handshake is implemented, the incentive treatment for this measurement would be treated in the same manner as any other measurement eligible for incentive treatment.

RATIONALE: Pacific, as the incumbent, has a significant advantage because all of its orders, once entered by its representative, go immediately into SORD. Conversely, CLEC orders must go through an interface before they go into SORD. Most of these order types do not flow through into SORD, rather the orders must be manually treated by Pacific. Having incentives for this measure will ensure Pacific is motivated to automate the number of orders that flow-through electronically.

MEASURE: 18a. Delay Order Interval To Completion Date and 20a.Held Order Interval

POSITION: Should be included in measures eligible for incentives.

RATIONALE: 18a is not a subset of 20a. 18a measures the number of days a completed order was late in being completed. 20a measures the number of days an order that still is not complete is delayed. Unlike 18a, 20a does not include completed orders, rather just those that are pending. Furthermore, if the delayed order is ultimately cancelled, which will happen when the customer becomes

frustrated, the result would never be reflected as a missed due date because the order would never be completed.

MEASURE: 28a. Percent Blocking on Common Trunks

POSITION: Should be included in measures eligible for incentives.

RATIONALE: Just because common trunks are shared by Pacific and the CLECs, doesn't mean that if Pacific, in its network management function, allows blockage to exceed a certain threshold (2%), it should be exonerated from paying incentives for the portion of the problem that impacted CLECs. This is the only measure that addresses common trunking. Additionally, because, as a percent of their traffic, CLECs will use significantly more common trunking than Pacific, it is critical that this measure be included.

Finally, although the CLECs may agree to limit the specific measurements to which performance penalties are applicable, the same concession is not intended with respect to the assessment of section 271 applications. Premature section 271 relief has the potential for more far-reaching and permanent damage to the competitive process than does failure to perform on a specific measurement within a specific month. Therefore, it is entirely appropriate that a much broader and comprehensive set of measurements be considered in the process of granting section 271 relief, that the risk of Type I and Type II error be balanced without modifications, and that conforming performance be demonstrated over a sufficient period to demonstrate reliability and stability of results.

MEASURES TO BE DECIDED

Finally, there are four measures for which Pacific has assigned a TBD.

PROVISIONING

7b. % of Orders given Jeopardy Notice 7c. Av. Jeopardy Notice Interval 19b. Coor. Customer Conversion 55y. Provisioning Trouble Reports

Pacific does not yet agree that these measures should be included in the incentives because the measures are not yet completely finalized. Pacific will agree to include these measures once they are finalized. The CLECs believe all of these measures should be included in the measures eligible for incentives.

c. Prerequisites for incentives to apply

Pacific Bell position:

Under Pacific's plan, measures are not subject to incentive/credit assessments until after three reporting periods. Results of the fourth reporting period are evaluated to determine if incentives/credits apply. This is appropriate because new processes may initially be unstable, requiring fine-tuning by Pacific and the CLEC, causing the results to be initially unreliable.

CLEC position:

The process for applying incentives should be simple and easy to understand. No prerequisites should exist. Instead, incentives should apply in the first month in which data is available and in which non-parity is found to have occurred. This is true for all existing and for any new measures, disaggregations, products or services, and systems and processes. The processes that support CLEC services presently are, for the most part, mature processes. Changes or enhancements should be pretested which would minimize fluctuations in service even when changes are made.

Certainly, if Pacific prevails in its advocacy that application of penalties should be delayed until the fourth measurement period, an even more lengthy period should be required before the performance supporting a section 271 application can be accepted. Indeed, if Pacific is indicating that its results will not be trustworthy until three months after the report month, then the section 271 procedure should give relatively little weight to any submitted result, as part of a section 271 application, that predates the application by three months or less.

Sprint position:

Sprint proposes that penalties are non-applicable if the CLEC chooses not to use the viable electronic interfaces of the ILEC.

A six month "burn-in" period should be allowed to debug respective ILEC and CLEC OSS interfaces to ensure that the measurements are being recorded and reported accurately.

The ILEC's OSS and OSS tracking mechanisms required for performance reporting should be tested, debugged and fully operational. The aforementioned OSS are defined as the National Standard requirements as specified by OBF and defined by the FCC. This definition encompasses all OSS functions including pre-ordering, ordering, provisioning, maintenance and repair, and billing

Note: Debugging refers to modifying and correcting system anomalies which occur during testing and implementation of OSS

d. Specific criteria for determining imposition of incentives

Pacific Bell position:

Generally.

Pacific is motivated to provide nondiscriminatory service to its customers for various reasons. First, the law requires it. If Pacific fails to provide nondiscriminatory service, CLECs may choose to file complaints, or seek other available remedies. Second, Pacific's level of performance may have an impact on its ability to provide long-distance service. Prior to Pacific receiving 271 approval, CLECs will contend that such approval should be withheld if CLECs are receiving discriminatory treatment. After Pacific has entered the interLATA market, CLECs may argue that Pacific's 271 authority should be revoked if Pacific is not fulfilling its obligation to provide nondiscriminatory service. Third, CLECs are Pacific's customers. The segment of Pacific's personnel that serves the CLECs are judged by the level of service they receive from Pacific. These personnel deal with the CLECs on a daily basis, one-on-one. They are motivated to represent the CLECs and resolve operational issues that may result in discriminatory treatment.

In addition, Pacific has proposed an incentive plan designed to provide additional motivation to treat CLECs in a nondiscriminatory manner. In this regard, the incentives should be viewed as a tool developed to help shape Pacific's behavior, rather than as a mechanism designed to compensate the CLECs.

Outline of Plan.

TIER I					
_Deviation	Severity	_ Ch	ronic Ele		Value of \$X
Туре	Element	1.mo.	2 mos.	4/6 mos.	
Category 1	1 < S.D. <u><</u> 3	\$0	\$X	\$1.3X	X = \$1,000/occurrence
Category 2	S.D. > 3	\$1.3x	\$1.6x	\$2X	and X ≤ \$25,000 per measure

Tier t is capped at \$100,000 per month per CLEC.

Commence of the second		
Widespread and Chronic Element	Payment is separated as a second	
Y measures missed, and all are repeat misses from previous month	\$100,000 in addition to Tier I total	

Notes:

Calculation by CLEC, by Submeasure. Each calculation is performed per individual CLEC for each submeasure that is eligible for incentive payments under Pacific's plan.

Chronic elements are not additive. If a submeasure is out of compliance for four out of six months, and also for two consecutive months, Pacific pays the higher of the two incentives, not both i.e., it pays \$1.3X, not \$1.3X plus \$X.

Chronic Element Applies Only In Out-Of-Compliance Month. In applying the chronic element of the formula, Pacific pays an incentive only if it is out of compliance that month. In other words, if Pacific is out of compliance on a submeasure by more than one standard deviation but less than or equal to three, for January, February, March and April Pacific pays \$1.3X. But, if Pacific is back in compliance in May, Pacific does not pay in May under the theory that Pacific was out of compliance in four of the past six months.

Forecasts and Trending. CLECs will provide forecasts to Pacific on a quarterly basis. If the actual aggregate volume submitted by CLECs exceeds forecasted levels by more than 20% in a given month Pacific will be relieved from incentive payments for those measures identified in Attachment A with an asterisk.

However, Pacific will obtain such relief only if CLEC volume growth is not foreseeable based on recent trends. Accordingly, should CLECs exceed the

forecasted level or fail to provide adequate forecasts, Pacific will obtain relief only if the actual aggregate CLEC volume for the given month also exceeds the actual aggregate CLEC volume by 20% for one of the previous three months.

Criteria for Assessing Incentive Payment.

Pacific's incentive plan incorporates three different criteria for purposes of evaluating the level of incentives to be assessed. First, Pacific's plan accounts for the severity of noncompliance. The incentive amount assessed against Pacific increases when the level of deviation increases from a Category 1 deviation (greater than one standard deviation but less than or equal to three standard deviations) to a Category 2 deviation (greater than three standard deviations). Second, Pacific's plan assesses greater incentive payments when the nature of the problem is chronic. Pacific pays more for a second consecutive month of noncompliance, and even more for being out of compliance four times within six months.

Third, Pacific's plan also levies a premium against Pacific for widespread, repeated problems. When Pacific is out of compliance on more than Y measures (on a basis of 1000 measures), and these measures were all missed in the previous month, a premium of \$100,000 is added to the payment calculated in Tier I. The requirement that these measures be repeated misses demonstrates that Pacific may be failing to correct a widespread problem, and it reduces substantially the likelihood that Pacific will be assessed a Tier II penalty for random variation. In other words, the repeating factor provides a certain degree of reliability that Pacific is missing the measure due to discriminatory treatment, and not due to random variation.

Amount of Incentive Payments.

The base incentive amount Pacific pays is \$1,000 for each occurrence (an "occurrence" is identified as a missed event, e.g., failure to meet due date) for any submeasure for which there has been a Category 1 deviation for two consecutive months, with a cap of \$25,000 per submeasure.⁶ This amount increases to \$1,300 per occurrence when a Category 1 deviation occurs a fourth time in a six month span, with a cap of \$32,500 per submeasure.

⁵ Pacific does not pay for a Category 1 result until the second consecutive month.

⁶ To calculate incentives, Pacific uses a formula that relies on occurrences. This has at least two redeeming values. First, it is not reasonable to create a revenue stream of \$25,000 per submeasure, per month, for CLECs that are sending very few orders. Second, Pacific's incentive should be greater where more orders are at risk, compared to where only a few orders are at risk (provided, however, that there is a cap to prevent Pacific from being penalized beyond a point at which the incentive has been adequately conveyed).

For Category 2 deviations, Pacific pays \$1,300 per occurrence in the first month, with a cap of \$32,500 per submeasure. In a second consecutive month, the amount increases to \$1,600 per occurrence, with a cap of \$40,000 per submeasure. When a Category 2 deviation occurs for a fourth time in a six month span, the amount increases to \$2,000 per occurrence, with a cap of \$50,000 per submeasure.

With regard to aggregation for purposes of qualifying under the sample size test (see discussion above on "Sample Size"), Pacific proposes paying \$1,000 per occurrence under either a Type 1 or Type 2 Aggregation, with a Type 1 Aggregation capped at \$25,000 per consolidated measure, and a Type 2 Aggregation also being capped at \$25,000 per CLEC. The Type 2 cap would not come into effect since it is presumed that the individual CLEC would have less than 25 occurrences. Thus, each CLEC would be paid \$1,000 per occurrence.

Tier I payments are capped at \$100,000 per CLEC, per month.

If Pacific's level of performance warrants a Tier II premium, under the criteria set forth above, a premium of \$100,000 is added to the amount calculated under Tier I.

The amounts Pacific proposes are more than adequate to provide Pacific with an incentive to provide CLECs with nondiscriminatory access to OSS. Assuming, conservatively, that only 20 CLECs are operating in California, Pacific's exposure is \$4,000,000 per month. Even where Pacific misses only 2 measures per CLEC in Category 1 for two consecutive months, Pacific's exposure is \$1,000,000. If Pacific misses four measures, the exposure rises to \$2,000,000. These amounts are more than adequate to motivate Pacific's management to demand that service problems be corrected expeditiously. Not only are the amounts by themselves compelling, but Pacific undoubtedly will receive undesirable publicity when, and if, it is required to make such payments. Headlines stating that Pacific is paying millions of dollars in penalties for poor performance will provide a strong motivational force.

Analysis of CLECs' Proposal.

Conceptually, Tier I and Tier II of Pacific's and the CLECs' plans are similar. Tier I assesses incentives on a per submeasure basis, per CLEC. The penalty increases based on the degree of deviation. It also increases if the problem is chronic.

Tier II of both plans increases the penalty in Tier I or assesses an incremental penalty based on the number of measures missed.

Pacific disagrees with the entire concept of Tier III in the CLECs' proposal. Tier III is purported to assess penalties when Pacific provides widespread poor service

to the aggregate CLEC community. However, because certain carriers' volumes can expected to be relatively much higher than the smaller CLECs, Tier III in effect assesses a penalty when Pacific performs poorly for the larger CLECs. Because the criteria for entering Tier III is almost identical to the criteria for Tier II, except that the former is aggregated, Pacific will in effect pay penalties in Tier III whenever it pays penalties in Tier II to the larger carriers. Even if this problem were somehow mitigated, it is not clear what Tier III is intended to add to the other two tiers. If Pacific is providing widespread poor service to the CLEC community, this will be plainly evident in any Tier I or Tier II analysis. Moreover, it is likely that if Pacific is providing poor service to a few CLECs, many if not most CLECs will also be affected. As a result, Tier III effectively will be a foregone conclusion in many instances.

On a more detailed level, Pacific opposes the CLECs' overall proposal for numerous reasons, the most important of which are listed below:

- No credit plan or other adequate form of mitigating random variation;
- A penalty is assessed the first month for a deviation of 1 to 3 standard deviations;
- The incremental step to two out of six months for the chronic element, and then three out of twelve months in Tiers II and III, is not reasonable;
- There are no caps on penalties;
- The Tier II and Tier III penalties are extraordinarily high
- The self-executing 271 denial/revocation.

Some of the effects of these detailed differences cannot be disassociated from a discussion on credits. Accordingly, Pacific examines these detailed differences more fully below in the section entitled "Credits," under the discussion of "Mitigation." Some of these differences, however, can be examined on a more general level.

First, assessing a penalty on the first month for a deviation of one to three standard deviations is unreasonable, since the likelihood of that event occurring, due solely to random variation, is 15%. In other words, on average, Pacific will be assessed a penalty every month on 15% of all measures if a consecutive month requirement is not incorporated.

Second, the incremental step of doubling the penalty if it happens twice in six months is even more unreasonable, since it is even more likely (22%) that an

event will occur at least twice in six chances than once in one chance. Since it carries a higher penalty, the chronic element should be used as a gauge to determine whether performance has become worse. Likewise, the odds increase even more that an event will occur three times in twelve chances (26%).

Third, the penalties proposed by the CLECs are extraordinarily high, with no caps. As discussed in more detail in the section on Credits, Pacific can be expected to pay several billion dollar per year based on random variation alone (i.e., even if Pacific is providing nondiscriminatory treatment). And, because a Tier II or Tier III violation keeps Pacific out of the long-distance market under the CLECs' plan, Pacific can count on never entering the long-distance market, through no fault of its own. Random variation alone is almost guaranteed to keep Pacific out of long distance. In fact, the chances of Pacific receiving long-distance approval under the CLECs' plan is almost zero.

Incentives should be designed to motivate Pacific to provide nondiscriminatory service to the CLECs. They should be set at a level that allows them to increase incrementally for poor service, and capped at a level where it is reasonably certain that Pacific's management will respond to the issues. The CLECs' proposal fulfills none of these goals. Their plan can be expected to penalize Pacific billions of dollars and keep Pacific out of the long-distance market, even if Pacific provides nondiscriminatory treatment to CLECs.

CLEC position:

The CLEC incentive proposal is based on two sets of incentives. Tier I /II incentives are payable directly to individual CLECs, while Tier III incentives are payable to the State of California general fund. Each Tier incentive is designed to motivate Pacific to provide parity service. If non-parity performance becomes more severe or widespread, the CLEC incentive proposal increases the amount of the incentive payments.

The Tier I/II incentives are designed to compensate individual CLECs for harm caused by Pacific's failure to meet designated performance measures. By contrast, Tier III incentives are intended to deter discriminatory treatment of the industry as a whole. If a Tier III violation occurs, the Tier III incentive payment is in addition to the Tier I/II payments made to individual CLECs.

The CLECs would like to clarify that the CLEC incentive plan does not include a cap on the payment amounts Pacific may incur, as does Pacific's proposal. A capped payment could be absorbed by Pacific as a predictable and normalized

⁷ For example, would you rather have the opportunity to roll one six with one die, or two sixes with six dice? One simple way to analyze your odds is that you get three chances to roll each of the two sixes you need if you choose the latter.

cost of doing business; in that case, the performance incentives would be ineffective. CLECs are also opposed to such a cap mechanism because it would limit Pacific's incentive to diligently correct out-of-parity performance once the cap had been reached. Simply put, once Pacific reaches the cap, it no longer has incentive to address all measures in non-compliance and will most likely focus only upon those measures that are easily fixed.

Tier I

Tier I incentives escalate based on the severity of Pacific's failure to meet the measures, i.e., the number of standard deviations by which each measure has been missed. They also escalate based on the number of times each measure has been missed over a period of months. Tier I incentives are imposed on all missed measures – there is no risk of penalizing Pacific for random variation, since at a critical value of 15%, both Pacific and the ILECs are at an equal risk of an erroneous result.

Tier I incentives for an individual CLEC are calculated as follows:

Violation Type	Severity	Incentive	Chronic
7		1st month	2 months/ out of 6
Category I	1 < s.d. ≤ 3	\$25,000	\$50,000
Category II	s.d. > 3	\$75,000	\$75,000

(s.d. = "standard deviations")

Tier II

Tier II incentives are imposed once Pacific has missed more than a threshold number of measures and are applied to all missed measures that exceed that threshold. The threshold number is calculated using modified z-statistic to assess parity of performance for individual results based upon a 15% Type I error rate and a 95% confidence level that more than random variation has caused the number of failures to exceed the threshold. The threshold level (number of measurement results expected to give a false indication of a lack of parity in a given month) will vary based on the number of measures being examined. Tier II incentives escalate based on the number of times the measures in excess of the threshold have been missed over a period of months.

Tier II incentives for an individual CLEC are calculated as follows:

Calculate the performance result for each measurement. Compute the modified z-statistic for each measurement and determine how many of the computed z-statistic results exceed the critical value based upon a Type I error rate of 15%. Based upon the number of results where the critical value is exceeded (for performance within the report month) and based upon the total number of performance results computed, determine if, at a 95% level of confidence, the number of failed results exceeds the number that would be expected to fail due solely to random variability of the results. If the threshold is exceeded then Tier II incentives are applicable for all missed measures.

Example — if there is data for 100 results evaluated, then the threshold would be approximately 20; if there is data for 1000 results, the permissible number of failures due to randomness is ~170. The actual number permissible will be dependent upon the Type I error rate adopted and the number of results evaluated but, in any event, the threshold can be explicitly calculated in advance and documented in a table format.

Incentive (Chronic)

1st month	(Number of missed measures) * \$75,000
2 months/out of 6	(Number of missed measures) * \$150,000
>= 3months/out of 12	(Number of missed measures) * \$300,000

Tier III

The Tier III incentives constitute a fine, designed to deter Pacific from engaging in conduct that suppresses competition from the CLEC industry. They are also based on Pacific missing a threshold number of measures, but for the entire industry rather than an individual CLEC. As above, the threshold number is calculated using a modified z statistic and will vary based on the number of measures being examined. The Tier III incentives also escalate based on the number of times the threshold number of measures have been missed over a period of months.

Tier III incentives, based on the CLEC industry in the aggregate, are calculated as follows:

Calculate the performance result for each measurement using the aggregation of data for all CLECs. Compute the modified z-statistic for each measurement and determine how many of the computed z-statistic results exceed the critical value

based upon a Type I error rate of 15%. Based upon the number of results where the critical value is exceeded (for performance within the report month) and based upon the total number of performance results computed, determine if, at a 95% level of confidence, the number of failed results exceeds the number that would be expected to fail due solely to random variability of the results. If the threshold is exceeded then Tier III incentives are applicable.

Example – if there is data for 100 results evaluated, then the threshold would be approximately 20; if there is data for 1000 results, the permissible number of failures due to randomness is ~170. The actual number permissible will be dependent upon the Type I error rate adopted and the number of results evaluated but, in any event, the threshold can be explicitly calculated in advance and documented in a table format.

Determine an incentive using the following table:

Condition	Applicable Market Suppression Incentive
One finding in last 3 months	\$.50/access line
Two findings in last 6 months	\$1.00/access line
More than two findings in last 12 months	\$2.00/access line

The CLECs agree that there is a risk of random variation resulting in a Tier III violation. Accordingly, in an effort to compromise on this point and to address Pacific's concerns about random variation, the CLECs recommend that if a Tier III incentive becomes due, it should be paid by Pacific into an interest-bearing escrow account. If no further Tier III violation occurs for the next 20 months (due to a 5% confidence level), the money would be returned to Pacific. If a new Tier III violation occurred, the escrowed money would be paid out of the account into the State general fund and the new Tier III incentive would be paid into the escrow account, triggering a new 20-month process.

Analysis of Pacific Proposal.

Regardless of the statistical methodology that is chosen with respect to performance incentives, both Pacific Bell and the CLECs face some degree of risk of getting a "wrong" answer and suffering harm as a result. A "wrong" answer occurs when parity is provided but the statistical test mistakenly indicates discriminatory performance (a "Type I" error), or when non-parity performance is provided but the statistical test mistakenly indicates parity performance (a "Type II" error). As a result of a Type I error, Pacific would pay incentives when it should not. As a result of a Type II error, a CLEC would receive discriminatory treatment and the consequent harm to its business.

Recognizing the potential for a "wrong" answer, Pacific's proposal goes to great lengths to mitigate its own risks of a Type I error, and the resulting financial exposure that it faces. The mitigation is found in its proposals for payment caps, two consecutive months of out-of-parity findings before payments begin, per-occurrence payments, and the credit plan. All of these mitigation efforts by Pacific would effectively bring Pacific's risk of suffering harm from a "wrong" answer down to almost zero.

Yet the Pacific proposal would leave CLECs still facing at least a 15% risk of being harmed due to Type II error. Nothing in the Pacific proposal, in fact, serves to lessen the CLECs' risk, rendering Pacific's mitigation entirely one-sided. Moreover, the Pacific Bell proposal does not provide any incentive to Pacific to correct the harm to the CLECs nor does it provide any compensation to the CLECs for that harm.

One of the fundamental problems with Pacific's proposal is that in most of its hypothetical scenarios, Pacific assumes it is providing complete parity of service. If that were the case, the consequences of random variation would fall solely on Pacific. In fact, however, it is a near certainty that Pacific will <u>not</u> be able to provide parity until its OSS are fully implemented and operational. Whether the review period on the statistical test is 6 or 12 months, it is extremely unlikely that Pacific will provide parity in that time frame. Thus, it would be unfair to adopt a proposal that assumes parity and then, as a consequence, pushes all of the risk onto the CLECs.

The proposed cap on the amount of incentives defeats the purpose of imposing incentives on Pacific Bell

Pacific includes a cap on the amount of incentives it would pay, either \$100,000 per month per CLEC or, in certain limited cases, \$200,000 per month per CLEC. The cap of \$100,00 is triggered by Pacific missing four performance submeasures, at \$25,000 per submeasure. Thus, if Pacific misses four submeasures for a particular CLEC in a particular month, the CLEC receives a payment of \$100,000.

This limit is, perhaps, the single most inappropriate portion of Pacific's proposal. The four submeasures cap must be placed in context of the total number of submeasures at issue. It is estimated that there will be approximately 1000 submeasures for some CLECs (though fewer for others), each of which requires parity service from Pacific. Yet Pacific proposes a cap of incentives on only four out of these 1000 submeasures.

Under Pacific's proposal, it would have enormous leeway to begin providing less than parity performance on hundreds of submeasures, without any fear of penalty or other consequence. In fact, once Pacific had missed four submeasures, it could begin to miss submeasures with impunity for a particular CLEC, knowing that no further incentive payments would be required and indeed would render meaningless the gathering of parity data on any other submeasures. In essence, Pacific would be free to drive any particular CLEC out of business, by failing to provide performance parity on hundreds of submeasures, for the sum of \$100,000 per month.²

Moreover, using Pacific's estimate of 20 CLECs operating in California, the cap per month is only \$4,000,000, or \$48 million per year. Pacific has 1998 annualized revenues of more than \$9 billion, and 1998 annualized income of more than \$2 billion; this \$48 million represents only .05% of Pacific's revenues and only 2.4% of its income. Pacific is thus hardly likely to be concerned about a maximum penalty of \$48 million per year. This is particularly true when combined with the fact, discussed above, that this \$48 million maximum permits it to provide out-of-parity performance on every single submeasure for every single CLEC for the entire year. It would be a small price for Pacific to pay to put all of its CLEC competitors out of business.

Credits

Pacific's proposal for credits is, as explained above, a means solely of mitigating Pacific's risk of a "wrong" answer. In an effort to mitigate its own risk, Pacific's credit plan allows ample opportunity to manipulate the results. As such, it is not an appropriate portion of an incentives plan. The substantive problems with the credits proposal are discussed in Section II.f.1 of this report, in the discussion of the CLECs' position on credits.

While it is true that Pacific has proposed to double the payment to \$200,000 if it misses "Y" measures, it has not defined "Y" and this penalty only applies to repeatedly missed measures. Pacific could choose to provide out-of-parity performance on 500 measures out of 1000 in one month, then provide out-of-parity performance on the other 500 in the next month, and the \$200,000 penalty would never come into play.

This information was obtained from the financial statements included in SBC's Investor Briefing on 2nd Quarter Results, dated July 16, 1998, found at http://www.sbc.com/Investor/earnings.html.

It is not appropriate to exclude incentive payments for the first month of outof-parity performance

Pacific proposes that no incentive payments be made for the first month of a Category I violation, i.e. a month in which a submeasure is provided in an out-of-parity manner between 1 and 3 standard deviations from the performance Pacific provides to itself. As Pacific acknowledges, this portion of its proposal reduces Pacific's risk of a Type I error from 15% to 2.25% (15% for the first month times 15% for the second month). Yet there is no commensurate reduction in the CLECs' risk of a Type II error, which remains at 15%. This is an unfair mitigation of only Pacific's risk.

Pacific states that it "pays more for a second month of noncompliance," but it then includes a footnote admitting that it "does not pay for a Category I event until the second consecutive month." Since Pacific's proposal is focused on Category I events (i.e., Category II only applies in the extremely unlikely event that lack of parity is more than 3 standard deviations from Pacific's performance for itself), Pacific essentially does not pay more for a second month of noncompliance. In essence, it pays nothing until the second month of noncompliance.

Pacific offers no justification for this <u>free month</u> of out-of-parity submeasures. Yet that is what it is – Pacific would permit itself to provide out-of-parity performance on all submeasures in a particular month and then, by providing parity performance on those submeasures in the next month, avoid payment of any incentives at all. In essence, Pacific's proposal permits it to provide out-of-parity performance on each and every submeasure six months out of every twelve and not pay any incentives. The resulting impact on an individual CLEC and its customers would be devastating, but there would be no disincentive to Pacific not to engage in such behavior.

The individual incentive amounts, per submeasure, are too low

Pacific has set the incentive payments at \$1,000 per occurrence (i.e., a specific, individual instance of lack of parity performance), up to a maximum of \$25,000 per submeasure. It proposes only to pay "per occurrence" because it does not want to pay \$25,000 to smaller CLECs who might have had fewer than 25 occurrences for a particular submeasure in a month. While this might be an appropriate limitation, it must work both ways. If a CLEC has more than 25 occurrences on a particular submeasure, it should be entitled to receive \$1,000 per occurrence for each and every occurrence. Pacific's proposal skews the result only in Pacific's favor.

There is no basis to exclude incentive payments until Pacific has gathered three months worth of data

Pacific also proposes that "measures not be subject to incentive assessments until after three reporting periods from the time that Pacific first begins reporting on a measurement." Wholly independent from the issue raised above of incentives not applying until there have been two months of out-of-parity performance, this separate issue allows Pacific another three months of providing out-of-parity performance without the risk of having to make any incentive payments to CLECs.

If Pacific is concerned that it needs three months to determine if it is providing out-of-parity performance and an opportunity to take corrective action, this concern is not appropriate. A CLEC and its customers can be severely harmed during the three month period in which Pacific provides out-of-parity performance, so there is no reason why the CLEC should not receive incentive payments during that time, even if Pacific is acting to resolve the problem. Indeed, the obligation to pay incentives to the CLEC should strongly motivate Pacific to correct its out-of-parity performance. A three month period where no incentives are to be paid provides no such motivation at all.

The trigger for the imposition of Category II incentives is not defined

Pacific's proposal for Category II incentives, increasing its monthly cap from \$100,000 to \$200,000, is stated to apply when "Pacific is out of compliance on more than Y measures (on a basis of 1000 measures)." There is no explanation by Pacific of the term "Y measures," nor is there any explanation of how the appropriate number of measures is to be calculated. Such a calculation method is a necessary part of the Category II proposal.

If Pacific means to use the same methodology proposed by the CLECs, that explanation should be added. If Pacific is proposing a new or different method of calculating the number of submeasures that must receive out-of-parity performance before Category II applies, it should provide an explanation of and a justification for use of that methodology.

The proposal lacks an appropriate Tier III type penalty to prevent out-ofparity performance for the CLEC industry as a whole

Pacific has included a category II penalty of an additional \$100,000 per month. This penalty is supposed to apply to chronic and widespread out-of-parity submeasures. In that sense, it is similar to the CLECs' proposed Tier II penalty,

Under the CLEC proposal, a higher level of penalties (Tier II) applies when the number of failed results exceeds the number that would be expected to fail due solely to random variability of the results. As an example, the CLECs stated that if there is data for 100 results evaluated, then the threshold would be approximately 20; if there is data for 1000 results, the permissible number of failures due to randomness is ~170.